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Water for Survival, Water for Pleasure – A Biopolitical Perspective on the Social Sustainability of the Basic Water Agenda

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ABSTRACT: This article explores the social sustainability of the basic water agenda. It does so through a biopolitical analysis of water narratives from eThekweni municipality, South Africa, where a policy of Free Basic Water (FBW) has been implemented. The article addresses the question of what water 'is' and 'does' and shows that water and water governance are productive of lifestyles, people's self-understanding and how they view their place in the social hierarchy. The analysis brings to light that a differentiated management system, that provides different levels of water services to different populations and individuals, becomes part of (re)producing social hierarchies and deepens divisions between communities. Based on these findings, the article argues that while the basic water agenda has brought successful results globally and remains important in terms of guaranteeing health and survival for the most vulnerable, it should not be confused with efforts of social sustainability. Social sustainability would not only involve a situation where basic needs are met but would also have to address effects of water systems on the relationships between individuals and populations in society.

KEYWORDS: Social sustainability, water, basic needs, biopolitics, South Africa

INTRODUCTION

Policy discourses of sustainable water management for household use, within the broader framework of Integrated Water Resources Management (IWRM) as well as the Millennium Development Goals (the MDGs) and the Sustainable Development Goals (the SDGs), largely focus on improved access to water for basic needs. This typically includes water use around 20 litres per capita per day (lpcd) (Hall et al., 2014: 850) for drinking, hygienic, food preparation and other domestic purposes.

Even if we should be wary of aggregated numbers as a way of describing reality (Fukuda-Parr et al., 2014), there is clear evidence of progress of the basic water agenda in terms of an increased access to improved water sources globally. The water dimension of the MDG target 7C, which focused on halving "by 2015, the proportion of the population without sustainable access to safe drinking water", was met five years ahead of schedule (UN, 2016a). The SDGs, in turn, are ambitious as the 6.1 goal sets out to "By 2030, achieve universal and equitable access to safe and affordable drinking water for all" (UN, 2016b). This means that an additional 663 million people need to be provided with improved drinking water sources (WHO and UNICEF, 2015: 4).

While the MDGs and the SDGs are important tools for promoting a basis for health and survival for the world's most vulnerable, concerns have been raised about the narrow focus of the water for basic needs agenda (Hall et al., 2014). According to Hall et al., the focus on safe and clean water for domestic uses is limiting in terms of the impact on people's livelihoods since it does not recognise water for productive uses, such as for example subsistence farming (see also van Koppen et al., 2009). Similarly, this article makes the case that there needs to be a deeper understanding of the role of water in people's lives. Drawing on literature in critical geography that focuses on the questions of "what water

is" (Linton, 2010; Budds and Linton, 2014: 179; see also Strang, 2004) and "what water does" (Hellberg, 2015a: 2), this article addresses the role of water and the basic water agenda in terms of its social effects.

The aim of this article is to explore social sustainability – a concept rarely discussed in the water management literature – in relation to the basic water agenda as it is implemented in the local context of eThekweni municipality. The analysis encompasses indicators of social sustainability that focuses on the *betterment of the conditions of an individual*, such as increased access to water, and on *the relationships between individuals and populations in a given society*, such as social integration and reduction of social and spatial fragmentation. Methodologically, this is done through an analysis of water narratives from a context of a water technology system that differentiates between water for basic needs and water for other uses. The narratives are explored from a biopolitical perspective, which places the governing of the conditions of life on the level of populations at the centre (Foucault, 1998; Dean, 1999).

The text draws on original fieldwork conducted in South Africa, an important case in terms of the implementation of the right to water. In South Africa, water is a right recognised in the constitution and the water legislation created in post-apartheid era is seen as one of the most progressive in the world. Since the democratic transition, water issues have however been characterised by several challenges, including redressing not only unequal access to the resource and service delivery protests (Bond and Dugard, 2008) but also water scarcity. At the time of writing this introduction, January 2017, drought conditions are experienced in five provinces, including KwaZulu Natal (The Department of Water and Sanitation, 2017). South Africa is an interesting site for exploring social sustainability because of its adherence to sustainable development generally (Death, 2011), and in the water sector specifically, and, at the same time, because big parts of its population still suffer from inequality patterns established in the apartheid era (Saul and Bond, 2014).

The site where data have been collected, eThekweni Municipality, has been argued by global policy institutions, to be a champion in providing sufficient water to sustain human life [...and] "serve[s] as a sterling example for the many communities worldwide" (SIWI, 2014). It was here that a policy of free basic water (FBW) of 6000 litres for each household per month, equivalent to 25 lpcd, was developed that, later, became national policy. Much has already been written about the nature of the hydro-politics in the eThekweni (Loftus, 2005a, b, 2006, 2007, 2009; Gounden et al., 2006; Bond and Dugard, 2008; Koenig, 2008; Bond, 2010; Narsiah, 2010; Nash, 2013; Hellberg, 2014, 2015a; Sutherland et al., 2015). This article does not aim to provide yet another review of its policies and practices. Given its role as an exemplary case, there are however still important lessons to be learned from eThekweni. In this article, the eThekweni example is examined in terms of how water and water technology systems may affect people's perception of themselves, their lifestyles and their place in society. In other words, the article discusses how we can understand what the production of water subjectivities mean for social sustainability. Arguably, such insights have implications for how we evaluate water management systems in relation to sustainable development.

The text proceeds as follows: first a discussion of the concept of social sustainability and the way it is approached in this article is provided. Then follows a presentation of the biopolitical perspective used to analyse social sustainability of the basic water agenda. After that the case of eThekweni municipality is presented along with the methodological approach of the article. An analysis of water users' narratives in relation to conditions of life and lifestyles and to social hierarchies is then presented. The result of the analysis is then, lastly, discussed and concluded in terms of how we can understand this in relation to social sustainability and the basic water agenda.

SITUATING THE CONCEPT OF SOCIAL SUSTAINABILITY AND ITS RELEVANCE TO WATER

That *sustainable development* has become *the* global development strategy cannot be better illustrated than with the 2030 Agenda for Sustainable Development. As has been commonplace when working with the concept of sustainable development, at least since the Rio+20 Summit in Johannesburg in 2002, the 2030 agenda commits to achieve sustainable development in its three dimensions: economic, social and environmental (UN, 2015).

Of these three, *social* sustainability is arguably the least defined and explored dimension. There is a greater disagreement about the objectives of social sustainability compared to the other pillars (Omann and Spangenberg, 2002; Littig and Grießler, 2005; Dempsey et al., 2011; Holden, 2012). It has been put forward that surprisingly little attention has been given to social sustainability (Dempsey et al., 2011). It has even been argued that environmental concerns have been prioritised over social concerns when embracing sustainability as a concept (Holden, 2012: 528; see also Vallance et al., 2011).

One of the reasons for this can be that it is unclear what the social dimension of sustainable development really means (Holden, 2012). The social sustainability literature has even been described as 'chaotic', 'messy' and even 'contradictory' and 'confusing' (Vallance et al., 2011). Social sustainability also raises difficult, and political, issues of equity (see Littig and Grießler, 2005) needs, justice and human well-being; issues that for decades have been part of the debate in relation to how we can understand and define the concept 'development'. Hence, academics and practitioners hold different views about what social sustainability is and how it can be reached and assessed. Yet, and arguably, this holds true also for economic and ecological sustainability, as these are also contested and highly political concepts.

While there is no consensus on the definition of social sustainability, it is commonly understood as related to a set of indicators or themes such as: quality of life, equity, inclusion, access, a future focus and participatory process (Holden, 2012, based on Partridge, 2005). Most theorists embrace the idea that to create social sustainability there is a need for social integration and a reduction of social and spatial fragmentation (see, for example, Stren and Polèse, 2000; Dempsey et al., 2011).

Different types of social sustainability have however been identified in the literature. Vallance et al. (2011) discuss three types; 'development sustainability', which focuses on basic needs, inequality and poverty reduction; 'bridge sustainability', which addresses human behaviour and their relations to environmental goals and lastly; 'maintenance sustainability', which concerns the preservation of sociocultural practices.

This article addresses indicators and issues that first and foremost belong to 'development sustainability'. Important for the argument of this article is that indicators within this type of social sustainability can be divided between those that focus on *betterment of the conditions of an individual*, such as access to water and quality of life, and those that focus on the *relationship between individuals and populations in a given society* such as social integration and reduction of social and spatial fragmentation. To a large extent, the basic water agenda works with the first-mentioned set of indications through its focus on quantities of water for survival and on life conditions of poor communities. As mentioned, the sustainable development goal number 6.1 focuses on achieving "universal and equitable access to safe and affordable *drinking* water for all" (UN, 2016b, my italics).

In this article, an analysis of social sustainability in relation to both the above-mentioned types of indicators is provided. So far, little attention has been paid explicitly to the concept of social sustainability in the water literature. However, there is a vast and closely related water literature that places questions of equity and the right to water at the centre (see Barlow and Clarke, 2002; McDonald and Pape, 2002; McDonald and Ruiters, 2005; Swyngedouw, 2005; Bakker, 2005, 2007, 2010; Sultana and Loftus, 2014). In such critical water literature, we for example learn that socioeconomic differences can be exacerbated even with what is understood to be progressive water policies (Birkenholtz, 2010),

which also have been shown in South Africa (see for example, Loftus, 2005a; Dugard, 2010; Bond and Dugard, 2008; Hellberg, 2014).

When analysing the basic water agenda from a social sustainability perspective, I build especially on literature that places emphasis on the question of "what water is" (Linton, 2010; Budds and Linton, 2014: 179) and "what water does" (Hellberg, 2015a: 2). This involves seeing water's productivity beyond its capacity to sustain life, focusing on the importance of water for livelihoods (van Koppen et al., 2009; Hall et al., 2014) as well as the impact of water and water technology on the way that people view and identify themselves and the role they play for their lifestyles (see, for example, Kooy and Bakker, 2008; von Schnitzler, 2008; Dawson, 2010; Hellberg, 2014; Rodina and Harris, 2016).

ANALYSING (SOCIAL) SUSTAINABILITY FROM A BIOPOLITICAL PERSPECTIVE

In order to place emphasis on the different ways that different water users are governed and the impact of water on people's lives and lifestyles, this article applies a biopolitical perspective. Biopolitics refers to the regulation and administering of the conditions of life (such as mortality, health, longevity, lifestyles) at the level of the population (Foucault, 1998; Dean, 1999). Biopolitics, in a Foucauldian sense, is part of neoliberal governmentality, which in turn is a term that describes how government is put to work in practice through a variety of techniques, ranging from biopolitical measures to governing of the self (Lemke, 2002). From such a Foucauldian understanding of neoliberal governance, it should be seen not as a political philosophy but as a practical 'art of government', that uses the agency of 'free' subjects to reach its goals (Dean, 1999).

A biopolitical perspective makes possible an inquiry into how different populations and different forms of lives are governed and the distinctions made between them (Duffield, 2007; Reid, 2013). This can be understood through Agamben's problematisation of the relationship between *zoë*, referring to "the simple fact of living common to all living beings" (Agamben, 1998: 1) and *bios*, meaning "the form or way of living proper to an individual or a group" (ibid.). Using this perspective, I address water governance in a sustainable development regime as a form of biopolitics that has certain ways of governing people depending on what kind of population they belong to (see also Hellberg and Knutsson, 2016). Hence, governing logics of sustainable development can be understood as involving a "biopolitical division" (Duffield, 2007: 68) between different forms of life.

However, if we are interested not only in the rationality of governing but also in their 'effects' in terms of social sustainability, we need to look into how individuals produce themselves as subjects in response to strategies of governing (Hansson et al., 2015; Hellberg, 2015b). According to a Foucauldian conceptualisation of power, biopolitical techniques work together with other power techniques, both disciplinary (directed at the individual body) and sovereign (exercised through the law) (Foucault, 2003: 242). These power techniques, in turn, are connected to how individuals internalise power through what Foucault termed 'technologies of the self' (Foucault, 1988: 18). Technologies of the self are ways for the individual to set rules for conduct and to transform themselves and their lives in relation to certain aesthetic values and criteria and to shape themselves as (ethical) subjects (Ibid: 10-11, 13).

In a way, water and biopolitics are notions that converge as they both centre on 'life' and can both be viewed as tools that can be used for a "transformation of (human) life" (cf. Foucault in Luke, 1999: 142, my brackets). In that sense, regulation of access to water is a perfect biopolitical mechanism. Karen Bakker (2010, 2012, 2013) has previously addressed water governance from a biopolitical perspective. According to Bakker, water is biopolitical through the ways in which governments optimise both water resources and water use in order to secure "the health and productivity of the population" (Bakker, 2012: 619). In her work on water as biopolitics, Bakker recognises both formal regulation and self-regulation (Bakker terms it self-policing) as ways of controlling water use (Bakker, 2013). Self-regulation or technologies of the self in the context of water use involve that the water users 'work on themselves' to become particular kinds of water users; for example, 'responsible' or 'sustainable' (see

Hellberg, 2014). Such a focus ties easily to the now rather extensive research theme of water subjectivities (see, for example, von Schnitzler, 2008; Kooy and Bakker, 2008; Sultana, 2009; Dawson, 2010).

In this article, a biopolitical perspective is applied to capture the role that water and access to water play for social sustainability. This includes an analysis of the meeting point between governing rationales and the way that the water users internalise these governing logics through the creation of water subjectivities. It also involves a focus on the effects of the water management system's way of distinguishing between different populations in terms of social stratification.

As we will see further on in this article, the way that the water management system separates those who rely on free basic water from those, more affluent, who can enjoy the free flow of water as long as they pay for it, has effects in terms of how they understand themselves and their place in society. These biopolitical effects are of relevance to how we understand the social sustainability of the water management system in South Africa since they affect the life conditions of the water users and the possibilities for social integration and for the probability of counteracting social and spatial fragmentation, which are characteristics of the country.

THE CONTEXT: SOCIAL SUSTAINABILITY AND WATER IN SOUTH AFRICA AND ETHEKWINI

Exploring the concept of social sustainability in South Africa is particularly pertinent, given that the South African constitution has an "unequivocal focus on justice" and is understood as one of the most progressive in the world because of its inclusion of socioeconomic rights (Dugard, 2010: 179). At the same time, many South Africans are experiencing a decline of formal labour and the increased precariousness of livelihoods (Bank, 2011). Furthermore, scholars have pointed to the limited change achieved by the ANC government in terms of reducing social and economic differentiation (Freund, 2010), and to the patterns of inequality established in the apartheid eras that have continued into the present (Saul and Bond, 2014). Service delivery protests, including a strong focus on water service delivery, have been seen across the country. As mentioned, a heated debate has taken place about the nature of the hydropolitics in the country, not least in relation to the situation in eThekweni municipality (Loftus, 2005a, b, 2006, 2007, 2009; Gounden et al., 2006; Bond and Dugard, 2008; Koenig, 2008; Bond, 2010; Narsiah, 2010; Nash, 2013; Hellberg, 2014, 2015a, Sutherland et al., 2015).

eThekweni municipality was created in 2000. It consists of the city of Durban, surrounding peri-urban residential areas as well as rural communities. The Integrated Development Plans (IDPs) describe development challenges within the municipality. Challenges that were listed in the 2006/2007 IDP as well as in the one for 2016/2017 include (but are not limited to) high rates of unemployment, high levels of poverty, low levels of skills and literacy, limited access to basic household and community services and high levels of crime (IDP, 2006/2007; IDP, 2016/2017). In terms of rolling out of basic water services, the IDP 2016/2017 notes a "tremendous progress" (IDP 2016/2017: 11).

When the data for the empirical section of this article were collected, in 2009, the head of eThekweni water and sanitation unit (EWS) Neil Macleod claimed that the EWS had brought water to about 1.2 million people in ten years' time (Macleod, 2009). According to the latest IDP, the numbers of consumer units that remain without access to basic water services are reportedly 68,957 (IDP, 2016/2017). The areas where the backlogs have been the greatest are township areas, including informal settlement and rural areas (IDP, 2006/2007; IDP, 2016/2017).

The eThekweni case is understood both as a success story and best practice example of sustainable water service delivery. As mentioned, the municipality was the place where the free basic water policy was first developed before it became a national policy. Initially, the policy meant that each household received 6000 litres monthly. Considering the number of members of a household as 8, this is equivalent to 25 lpcd. The FBW amount was then raised to 9000 litres in July 2008. The municipality is

seen as a pioneer in sustainable service delivery also for its innovative policies and technologies. However, its critics view the municipality as an example of a neoliberal management model that causes, or maintains, an unequal access to water. eThekweni municipality has been critiqued for its tariff and payment systems in terms of how they affect the poor and for the inadequacies of water systems in rural areas (Loftus, 2005a, b; Naidoo et al., 2007; Bond, 2010). The municipality has also been critiqued for that the introduction of the FBW has involved a more severe control of each household's water supply (2005a) and for policies and practices which exacerbate differences between individuals and populations (Hellberg, 2014).

The particular water governance model in eThekweni is characterised by viewing water both as a right and as a commodity. Neil Macleod expressed this with the following words:

I introduced free water back in 1996 and it became a national policy in 2000. That concept of seeing water both as a right and as a commodity, which is unique I guess. So I stand with one leg in the rights-based approach and one leg in the commodity approach. The industry, the rich people who can afford to pay must pay the full price. Those who cannot afford to access the amount of water that is necessary for basic living.. must get that for free. That has been our philosophy since 1996 (MacLeod, 2009).

Different policies and technical solutions are applied to different individuals and populations, i.e. the water technology system is differentiated according to factors such as geography and social-economic status. The different technologies used include ground tanks (poor rural areas) and water dispensers/standpipes (urban informal areas) that guarantee the user FBW). The other two service levels include the semi-pressure supply (poor township areas) received by the household via a roof-tank and the full pressure water supply (township and suburban areas) fed directly to the household from the supply network. Different tariffs are charged for domestic customers based on the type of water service they receive and the amount of water they use; progressive water tariffs are applied, with prices rising for each price block. Another water management device is the flow limiter, which is a meter that can be set to restrict water supply at certain amounts. It can be set to only allow the FBW at higher levels or it can allow a flow of an unrestricted amount of water depending on the contract that the water user has with the municipality (for water policy during fieldwork period see EMWP 2008/2009).

This way of arranging water service delivery; to target certain types of populations for particular technological solutions can be understood as a central biopolitical technique (Hellberg, 2014, 2015a). This technique, in turn, has effects that are relevant to how we can understand the social sustainability of the system. We turn next to the methodology of examining these effects.

METHODS AND ANALYSIS

The interviews conducted for the study are based on a narrative methodology where water users have told their life stories in terms of their relationship to water and access to water. They have also been asked to tell stories of particular water technologies (use of meters, standpipes, taps and so on) as well as relate them to the changes in access to water and water services. A narrative methodology has been adopted because it provides a way of creating texts about how the water users make sense of their water situation and how they, through their stories, construct a sense of self (Elliott, 2005: 126; Hinchman and Hinchman, 1997: xvi). These stories are necessarily co-constructions of reality by both the interviewer and the interviewee (Stern, 2006: 185). However, in accordance with narrative methodology, which stresses the agency of the storyteller, the narrators are to be seen as authors of their own stories (Hinchman and Hinchman, 1997: xix).

Interviews with 64 narrators were conducted in four different areas of the municipality: one rural community (Mzinyahiti), one peri-urban/township area (Inanda/Ntuzuma), one 'Urban' township

(specifically the communities of Westcliffe and Crossmoor in Chatsworth) and Suburban middle class areas (Berea, Glenwood, Westville, Merbank Ridge and Wentworth Assegai).¹ These interviews were carried out at the end of 2008 and in 2009. This means that while some time has passed since the collection of data, they were done after raising the FBW level to 9000 litres per household per month. The narratives are thereby accounts of current service standard levels² (eThewini Service level standards, 2016/2017). The rationale behind choosing these particular sites is that they include all different ways of accessing water identified in the municipality: ground tanks, access to water through full pressure or semi-pressure supply, standpipes, flow limiters as well as the so-called 'illegal connections'. These areas also include different types of residential areas (rural, peri-urban, urban township, suburban) existing in the municipality and thus of both rich and poor communities. The interviews were conducted together with a field assistant, who in some cases also acted as a translator from isiZulu to English. The narrators were asked the same set of questions. Quotations have been edited for readability.

For this article, the water narratives have been read through a biopolitical lens with a focus on aspects of social sustainability, including indicators that focus on *betterment of the conditions of an individual*, such as access to water, and quality of life, and those who focus on the *relationship between individuals and populations*. Hence, the empirical section of this article is an exploration of what water is and what it does for the narrators' life, lifestyles and senses of selves. This will be presented in the next two sections. First, we learn how water and access to water is related not only to the physical survival of the narrators but how it is linked to how they tell stories of their life conditions and themselves. Second, we learn how this matters in relation to views of the right to water/basic water and the production of social hierarchies. Given the scope of this article, what is provided below is to be seen as snapshots of narratives, which are illustrative of the role of water in people's lives, rather than complete water life stories.

BEYOND SUSTAINING LIFE

In the water users' narratives, the physical need for water to survive lurks in the background of their stories. However, water is not only related to life in the sense of survival, but is explicitly connected to how people perceive themselves, their own quality and way of life and those of others.

Personal water life (hi)stories reflect both experiences of being disadvantaged as well as those of being privileged, depending on the water users' social-economic status. For example, Janitha living in Westcliffe in Chatsworth, marked by poverty and degraded housing, explained how she viewed the changes that will come after implementation of the so-called flow limiters in Chatsworth. The flow limiters will mean that the residents will get their FBW but they will have to pay for the amount above that level. She also explained:

The rich can buy the water, but the poor can't buy water (...) They are going to put that meter on the water pipe so they are going to give us certain amounts of water for daily use and if we overuse, we are going to have to pay. But if we can't afford to pay them, they are going to [cut off the water] and give us that little bit of water but the little bit of water won't be enough to flush our sewage, have a clean bath, wash our clothes, eat. That means *we are going to live a filthy life* (my italics).

Likewise, in other informal settlements and in the townships around the municipality, the theme of water stirred narratives of hardship and struggle. These water narratives were intertwined with how

¹ This study is part of a larger study (Hellberg, 2015a) and parts of its results have been previously published in Hellberg, 2014 and Hellberg, 2015b.

² One difference however is that not all households are eligible to the FBW amount as earlier. Properties with a value of more than R 250,000 are now charged for the usage of their first 9000 litres of water (eThewini Service level standards, 2016/2017).

the water users understood their lives and themselves. Mrs. Shabangu who lives in Ntuzuma Lindelani said for example:

I have never got it [water] easy because, as I have said, I grew up in a rural area. I never got it easy because I fetched it from the river, which was far. It wasn't by my house. You had to walk a long distance to the river. I moved here, where I live now (...) I never got it easy because [now] I have to pay for it. I have to pay the person who is going to fetch water for me. *I have never got it with happiness and enjoyed having it just because I have no tap (my italics).*

In Mrs. Shabangu's story, water represents a struggle both in the past and in the present, as she has never had water available close to her home. This illustrates the unfortunate, and costly, situation for those who live in informal settlements with standpipes located far away from their shelters which means that they have to pay so-called 'water vendors' in order to access water for their daily needs.

Jacob, also living in Ntuzuma in a newly established RDP house area (RDP houses are cheap houses built as an effect of the Reconstruction and Development Programme), has got what the municipality terms 'the semi-pressure system', which means that he receives water, with lower pressure compared to the 'full pressure' option, via a roof-tank. Jacob's way of narrating his experiences of water service delivery acknowledges the changes in water access as an improvement in his life conditions. At the same time, however, the low-pressure service he receives and the fact that he is deprived of information on water interruptions is interpreted as being related to who he is as a black South African living in a township area. In his narrative, Jacob presents a view of water service delivery that separates between different kinds of water users on the basis of race and on the kind of areas where they live. In this story, Jacob considers himself as a victim of such discriminatory practices as a result of his subject position as a member of the black working class.

In comparison, in many of the narratives from the (more wealthy) suburbs, water subjectivities take shape through the contrasting of others less fortunate, which in turn illustrates how a certain form of exotification of others plays a role in the construction of one's own lifestyle, identity and relationship to water. Lauren, said, for example:

I think I do feel, particularly, like you know, particularly since in South Africa there is such a social diversity, I understand that *I'm very fortunate*, the fact that we have access to clean water all the time and I do feel that, you know, it must be very hard living in rural areas having to fetch and carry water all the time and I imagine that if you did have to go to a central pump to fetch water every day *your life would be very different (my italics).*

In all the narratives discussed above, water comes to represent how the water users feel about themselves and their way of life. What comes out clearly is that water, in the townships and informal settlements, is a theme that is often spoken about as involving a struggle in your everyday life because of problems with paying bills and getting mere access to it. Even if every narrative is unique, these stories reflect that what we have learnt through critical water research, focusing on water struggles in South African disadvantaged communities and inequalities in water regulation and management (see, for example, Loftus, 2005a; Dugard, 2007; Bond and Dugard, 2008; Rodina and Harris, 2016). What is perhaps less known, and of interest from a biopolitical perspective, is how more well-off individuals make sense of their situation in contrast to such narratives of struggle.

In the richer suburbs, water is something that is intimately connected to a convenient and pleasurable lifestyle. In these areas, water use – apart from basic functions – extends to leisure gardening, deep baths and play around the swimming pools. In this sense, water's relationship to life and what it does, according to the narrators, extends far beyond sustaining life but is fundamental to the construction of the proper or the good life (i.e. the difference between *zoë* and *bios* (Agamben, 1998)). Lauren's narrative, for example, illustrates this well when she describes the evening routines in her family:

When we had a long day and everybody is a little frantic, you know, the children – I just to put them into the bath, or the shower, and I wash their hair and scrub them from head to foot so I have got nice clean children. They become very calm and it's like their signal: it's bedtime, you know. So, it has always been the mark for us, for our family, for the children that the day is over now, you know. They must wash and calm themselves down and get themselves into bed. So for that [reason], it is a big... that's in itself an essential realm, I suppose, in terms of my well-being [laughter].

In such stories, water is connected to pleasure and relaxation, which was a theme exclusive to the affluent parts of the municipality. For example, when I asked Carol what she associated with the word water, she answered very quickly "pleasure! ja I love water". Relatedly, Lauren said: "I would associate it with all good things, with swimming and sparkling oceans and perhaps to go further: serenity I suppose, or you know, I really enjoy swimming so relaxation as well".

Because of these productive effects of what water means and does in people's lives, differences in access to water produce biopolitical effects. Such effects include a division of the population between those who are supposed to be content with survival and those who can enjoy a convenient and pleasurable life in connection with water. Additionally, as previous analyses have shown (Hellberg, 2014, 2015), since these solutions are directed at different populations and also at different individuals (for example, not allowing everyone in the community to rely on unlimited access through the flow limiters), this system has differentiating effects not only *between* communities but also *within* them. As a result, differences in terms of how people understand themselves and their life conditions are excavated between both areas and households.

THE RIGHT TO (FREE BASIC) WATER AND SOCIAL HIERARCHIES

What does it mean, then, to claim the right to, and to rely on, (basic) water in this context? Because of the different roles that water plays in people's lives, from sustaining life to generating pleasure, making sense of the claim is not a straightforward task. On the one hand, water's essential role for survival makes it possible to make (bio)political claims in the sense that everyone should have (free) water to survive. Andile, living in the rural Mzinyathi, said for example: "water and sanitation are the first priorities to human life (...) it is the foundation of human life" and he continues explaining that this is the reason why no one can say that "if you can't pay for it, you can't have it". This stance is common; in the water users' accounts there is a strong adherence to the universal right to water for basic needs. In this sense, water has the political potential to produce common notions of humanity; to connect people and make visible the similarities between humans. However, when speaking about their and others' right to water as South African citizens, the narratives highlights an ambiguity in terms of how they understood what everyone has the right to in relation to their understanding of their own right. Thus, many narrators simultaneously talk about similarities and differences between people in relation to the theme of water. In such narratives, the claim that everyone has the same need contrasts with the emphasis of the differences between people in the country.

When it comes to the narrators' personal understandings of what can be expected and what their individual rights are, ideas of deprivation, privilege and understanding of social hierarchy play key roles and thus inform their water subjectivities. In poorer areas, many narrators who have recently obtained access to the FBW testify that it has improved their life conditions. For example, narrators from the rural Mzinyathi explain that they do not have to walk long distances to fetch water it frees up time for other things (such as, for example, engaging in small business activities and school) and the water they now use is clean.

Sipho, living in the rural community Mzinyathi, related the provision of piped, clean water to the positive change that has come as a result of the new post-apartheid government. However, he also spoke of the grey tanks installed in the area as a 'low cost' technology, especially designed to fit a certain population. He said: "I think they made [the tank] on the basis of poor people just like us [in]

poor communities". Hence, while being a symbol of the new citizenship, access to water the way it is designed simultaneously is a reproduction of the unequal distribution of resources under the apartheid era. Reflections like Siphos mentioned above highlight the way that a person's sense of self and images of communities within the new South Africa are shaped by, or related to, the application of different devices in different communities. Andile, also a resident in Mzinyathi, answered the question of how he saw the tanks: "I'd like everything to be equal, I'd like people to live the same life". His statement illustrates the connection between access to water and the life that people lead. It should be understood as a critique towards the distinctions made between different populations in terms of their water services. Andile has a strategy of resisting the municipality's policies and practices as he has what is called an illegal connection to the network of water and can thereby access as much water as he wants.

Similar to Siphos, the inhabitants in the informal settlement in Crossmoor are appreciative of the standpipe that had recently been installed close to their shelters; but, at the same time, one narrator spoke of the people in the community as being neglected. One of the inhabitants, Samuel said: "they have forgotten about us here, we are still here and no one wants to talk to us". By claiming that the people living in the settlement have been 'forgotten' and that he sometimes feels like 'an animal' because of the lack of possibilities to privately taking care of his hygiene, Samuel narrated himself as a figure who has formally been granted citizenship and incorporated into the system of rights, such as the right to FBW, yet stripped of humanity, as being both inside and outside of political community. Such feelings of exclusion are also related to other ways by which these narrators are deprived, such as in terms of housing. This is however exactly the point; that the governing rationales work so as to produce different technological and policy solutions for different populations and users. Thereby they become part of the assemblage of artefacts and power relations that entrench differences. In the decisions on "who gets what, when, where and how" (Turton, 2002: 16), other material factors than water availability are of importance, such as existing infrastructure, including housing and sewage systems.

In some of the stories from the richer suburbs there are clear distinctions made in terms of self and other. Lauren's statement is illustrative:

I think it is something that we all should have – yeah running water. Mains, water running into the houses, definitely. I don't know about people who live in very rural areas. I imagine that, in life as well, that you use what you are given, you know. If you have a water source nearby, obviously you wouldn't live somewhere if you didn't have a freshwater source nearby, generally people, I would imagine who live near the water source... *but for me* it would be a basic function, would be a basic expectation to have a flushing loo, to have water mains, to have water pumped in to my, to the tap, you know (my italics).

In Lauren's narrative, what is understood to be basic functions of water services is relative to what she is used to, according to her socioeconomic class. This is symptomatic of the water narratives, as the narrators understand their individual rights in relation to history and how they are used to living their lives. On the one hand, this makes it possible to claim the right to water because of the injustices perpetrated during the apartheid era. The present continuance of lifestyles produced during the apartheid era, however, simultaneously has the effect of making social hierarchies appear 'natural' since (some, not all) users expect water service delivery to be arranged according to how it has been arranged historically. This can partly be understood in relation to the everydayness and inconspicuousness (Sofoulis, 2005: 448, building on Shove, 2003: 2) of water since what people do daily becomes part of what they understand as 'normal' and 'natural'. Furthermore, even though it can be argued that these inequalities were, in many ways, established in the colonial and apartheid eras, the subjectivities and the social hierarchies produced in the meeting between governing structures and the water users in the post-apartheid era are something new. In this process, intersectional subjectivities (rather than race exclusively) feature through how the water users understand their water services and the reasons for them to get the particular water service that they do (as well as for their outlooks on

being able to live a good life in the future). Mcebo, for example, explained these dynamics in terms of class and said that once a person belongs to a certain class he has more in common with his neighbours than with the people in the township, where he used to live. He said:

I wish to carry this lifestyle and... and take my house and just boom! [I would place it] inside the township... Because the things I enjoy there I cannot find them... the things I enjoy here I want to go with them there but it's impossible to do that.

In Mcebo's story, the spatial dimension of differentiation appears clearly, where his sense of belonging with the people and the culture in the township clashes with his desire for a better lifestyle. As a consequence of these dynamics in post-apartheid South Africa, in some narratives, there is ambivalence in terms of how the self is understood not only in relation to inclusion in the local community but also relating to more abstract ideas about inclusion/exclusion from the political community, where understandings of being right-bearing citizens are in conflict with the experience of (still) feeling disadvantaged.

DISCUSSION

What needs to be reckoned with when we analyse effects of water service delivery policies and practises is what water 'is' and 'does'; that water is not only a resource that keeps us alive but contributes to how we understand ourselves and our place in society. In that sense, productive uses of water extend also to form us as humans and citizens and the societies in which we live. This means that we cannot distinguish the biological work that water does in keeping bodies alive, from the political work it does that reaffirms people's senses of selves and their place in the social hierarchy. However, the biopolitical distinction made in policy and practice between water for basic needs and water for other uses is highly relevant for discussion. The effects of such a policy, involves a separation of those who should merely survive from those who can live a convenient pleasurable life. Such understandings of the social hierarchy in relation to water also resonate with the narrators' stories.

This analysis implies that if we hold the view that social sustainability should counteract the production of differences in terms of living conditions between people, a focus on indicators such as improved access to water, education and training and participation in decisions concerning water issues is not enough. Such indicators could rather be understood as 'weak' indicators of social sustainability that need to be complemented with a focus on the effects of water management on the relationship between individuals and populations, which might be termed 'strong' indicators.³ Hence, the story about water and social sustainability is much more complex than the question of whether people are connected to the network or not. To comprehend these links, a deeper understanding of the different roles of water in society, including a focus on water for productive uses (van Koppen et al., 2009; Hall et al., 2014) and its social effects is needed.

Thus, the basic water agenda on the global level surely contributes to life and health for a greater share of the world's population. Should the sustainable development goal number 6.1 be successful this will be a great victory for the some 663 million people around the world who lack access to safe drinking water. However, in this article it has been put forward that water and access to water affect the way people feel about themselves and (their place in) the societies in which they live. Therefore, we ought to be critical towards framing a water access that focuses merely on *drinking* water as a way forward for reaching sustainable development and especially in terms of how the basic water agenda

³ These concepts are inspired by the concepts 'weak' and 'strong' sustainability that are used in ecological economics to describe different approaches to environmental sustainability (see Turner, 1993; Ekins et al., 2003). The terms weak and strong *social* sustainability were first suggested by Stina Hansson during a seminar at the School of Global Studies, University of Gothenburg, in which I presented my work on water and social sustainability.

relates to *social* sustainability. Rather, providing people with a minimum level of water security (cf. Foucault, 2008: 207) while allowing a commodification on water above that level risks further entrenching of differences between individuals and populations locally and globally.

CONCLUSION

The aim of this article has been to explore social sustainability in relation to the basic water agenda as it is implemented in the local context of eThekweni municipality. In relation to this aim, we learn two important things from the water narratives.

First, water is not only a resource that keeps us alive but also contributes to people's lifestyles, perceptions of themselves and their place in society. Second, the notion of basic water is related to social hierarchies in several interrelated ways. What is understood to be basic functions of water services is relative to what people are used to, according to their socioeconomic class. This is one factor that makes inequalities and social hierarchies that have been sustained after the democratic transition to appear 'natural'. Simultaneously however, the fact that the water users understand the right to water in relation to history makes it possible to claim the right to water because of the injustices during the apartheid era. Yet, this right to water is seen as a right to *basic* water, in line with South Africa's water policies and as something that is part of creating better life conditions for those who were previously living without proper water services. At the same time, relying on FBW is understood as part of a life of struggle or of belonging to poor communities; narrators living in informal settlements, rural areas or in the townships testified that their water situation contributed to their view of themselves as disadvantaged and sometimes even dehumanised. However, these water users are not passive victims but also practice resistance through, for example, illegal connections. In contrast, those narrators living in well-off suburbs, who can use relatively large amounts of water, narrate themselves as fortunate and privileged and their lifestyles as convenient and pleasurable.

While such a privileged life is attainable through individual social mobility in terms of class, the biopolitics of governing rationales work to deepen divisions between communities. Furthermore, since these policies and technologies are directed at specific populations that live in certain areas because of apartheid spatial planning, these divisions also tend to cement differences spatially.

Hence, a biopolitical reading of water narratives in relation to social sustainability suggests that a focus on *betterment of the conditions of an individual*, such as, the rolling out of basic water services is not sufficient to reach social sustainability. Rather, there needs to be an explicit focus on the *relationship between individuals and populations*. In other words, guaranteeing survival for the most vulnerable individuals and populations through policies of basic water, such as in South Africa, is of vast importance, but we should not confuse these efforts with social sustainability. Social sustainability, as it is understood in this article, includes striving for lives to be lived beyond mere survival. It also requires that members of society feel included and integrated in and between geographical areas and political communities. However, to reach such a state of sustainability we require a new political economy that can transcend the way neoliberal modes of governing produce distinctions between *mere life* and *the good life* through the basic needs agenda.

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REFERENCES

- Agamben, G. 1998. *Homo sacer: Sovereign power and bare life*. Stanford: Stanford University Press.
- Bakker, K. 2005. Neoliberalizing nature? Market environmentalism in water supply in England and Wales. *Annals of the Association of American Geographers* 95(3): 542-565.
- Bakker, K. 2007. The 'commons' versus the 'commodity': Alter-globalization, antiprivatization and the human right to water in the global South. *Antipode* 39(3): 430-455.
- Bakker, K. 2010. *Privatizing water: Governance failure and the world's urban water crisis*. Ithaca and London: Cornell University Press.
- Bakker, K. 2013. Constructing 'public' water: The World Bank, urban water supply, and the biopolitics of development. *Environment and Planning D: Society and Space* 31: 280-300.
- Bank, L.J. 2011: *Home spaces, street styles: Contesting power and identity in a South African city*. London: Pluto Press.
- Barlow, M. and Clarke, T. 2002. *Blue gold: The fight to stop the corporate theft of the world's water*. Toronto: Stoddart.
- Birkenholtz, T. 2010. 'Full-cost recovery': producing differentiated water collection practises and responses to centralized water networks in Jaipur. *Environment and Planning A* 42: 2238-2253.
- Bond, P. 2010. Water, health and the commodification debate. *Review of Radical Political Economics* 42(4): 445-464.
- Bond, P. and Dugard, J. 2008. Water, human rights and social conflict: South African experiences. *Law, Social Justice and Global Development Journal* 1: 1-21.
- Budds, J. and Linton, J. 2014. The hydrosocial cycle: Defining and mobilizing a relational-dialectical approach to water. *Geoforum* 57: 170-180.
- Dawson, M. 2010. The cost of belonging: Exploring class and citizenship in Soweto's water war. *Citizenship Studies* 14(4): 381-394.
- Dean, M. 1999. *Governmentality: Power and rule in modern society*. Los Angeles, London, New Dehli, Singapore: Sage.
- Death, C. 2011. Leading by example: South African foreign policy and global environmental politics. *International Relations* 25(4): 453-476.
- Dempsey, N.; Bramley, G.; Power, S. and Brown, C. 2011. The social dimension of sustainable development: Defining urban social sustainability. *Sustainable Development* 19(5): 289-300.
- Duffield, M. 2007. *Development, security and unending War: Governing the world of peoples*. Cambridge: Polity.
- Dugard, J. 2010. Can human rights transcend the commercialization of water in South Africa? Soweto's legal fight for an equitable water policy. *Review of Radical Political Economics* 42(2): 175-194.
- Ekins, P.; Simon, S.; Deutsch, L.; Folke, C. and De Groot, R. 2003. A framework for the practical application of the concepts of critical natural capital and strong sustainability. *Ecological Economics* 44(2-3): 165-185.
- Elliott, J. 2005. *Using narrative in social research: Qualitative and quantitative approaches*. LA, London, New Dehli, Singapore: Sage.
- eThekweni Municipality Water Policy (EMWP) 2008/2009. eThekweni municipality water policy 2008/2009. No longer available online, in author's possession.
- eThewini Service level standards 2016/2017. www.durban.gov.za/City_Services/water_sanitation/Service_Level_Standards/Documents/Service%20Level%20Standards%20Books%20English%20%20July%202016%202017%2010th%20Edition.pdf (accessed 17 January 2017)
- Foucault, M. 1988. Technologies of the self. In Martin, L.H.; Gutman, H. and Hutton, P.H. (Eds), *Technologies of the self*, pp. 16-49. Amherst: University of Massachusetts Press.
- Foucault, M. 1998 [1976]. *The will to knowledge: The history of sexuality I*. London: Penguin books.
- Foucault, M. 2003. *Society must be defended, Lectures at the Collège de France 1975-1976*. New York: Picador.
- Foucault, M. 2008. *The birth of biopolitics, Lectures at the Collège de France 1978-1979*. New York: Palgrave Macmillan.

- Freund, B. 2010. Is there such thing as a post-apartheid city? *Urban Forum* 21(3): 283-298.
- Fukuda-Parr, S.; Jamin, A. and Greenstein, J. 2014. The power of numbers: A critical review of Millennium Development Goal targets for human development and human rights. *Journal of Human Development and Capabilities* 15(2-3): 105-117.
- Gounden, T.; Pfaff, B.; Macleod, N. and Buckley, C. 2006. Provision of free sustainable basic sanitation: The Durban experience. Paper presented at the 32nd WEDC International Conference, Colombo, Sri Lanka, 13-17 November 2006.
- Hall, R.P.; van Koppen, B. and van Houwling, E. 2014. The human right to water: The importance of domestic and productive water rights. *Science and Engineering Ethics* 20(4): 849-868.
- Hansson, S. and Hellberg, S. with Stern M. (Eds). 2015. *Studying the agency of being governed: Methodological reflections*. London: Routledge.
- Hellberg, S. 2014. Water, life and politics: Exploring the contested case of eThekweni municipality through a governmentality lens. *Geoforum* 56: 226-326.
- Hellberg, S. 2015a. The biopolitics of water: Technology, subjectivity and lifestyle in eThekweni Municipality, South Africa. PhD thesis. University of Gothenburg, Sweden.
- Hellberg, S. 2015b. Studying the governing of lives through bio-narratives. In Hansson, S. and Hellberg, S. with Stern, M. (Eds), *Studying the agency of being governed: Methodological reflections*, pp. 167-186. London: Routledge.
- Hellberg, S. and Knutsson, B. 2016. Sustaining the life-chance divide? Education for sustainable development and the global biopolitical regime. *Critical Studies in Education*. <http://dx.doi.org/10.1080/17508487.2016.1176064>
- Hinchman, L.P. and Hinchman, D.K. (Eds). 1997. *Memory, identity, community: The idea of narrative in human sciences*. New York: State University of New York Press.
- Holden, M. 2012. Urban policy engagement with social sustainability in Metro Vancouver. *Urban Studies* 49(3): 527-542.
- IDP (Integrated Development Plan). 2006/2007, eThekweni Municipality Integrated Development Plan 2006/07 www.durban.gov.za/Documents/City_Government/IDP_Policy/IDP_2006_07.pdf (accessed 16 January 2017)
- IDP. 2016/2017. eThekweni Municipality Integrated Development Plan 2015/2016 www.durban.gov.za/city_government/city_vision/idp/documents/final%202016_17%20IDP%2029052016.pdf (accessed 16 January 2017)
- Koenig, R. 2008. Durban's poor get water services long denied. *Science* 319(5864): 744-745.
- Kooy, M. and Bakker, K. 2008. Technologies of government: Constituting subjectivities, spaces, and infrastructures in colonial and contemporary Jakarta. *International Journal of Urban and Regional Research* 32(2): 375-391.
- Lemke, T. 2002. Foucault, governmentality, and critique. *Rethinking Marxism* 14(3): 49-64.
- Linton, J. 2010. *What is water? The history of a modern abstraction*. Vancouver and Toronto: UBC Press.
- Littig, B. and Grießler, E. 2005. Social sustainability: A catchword between political pragmatism and social theory. *International Journal for Sustainable Development* 8(1-2): 65-79.
- Loftus, A. 2005a. A political ecology of water struggles in Durban, South Africa. PhD thesis, University of Oxford, UK.
- Loftus, A. 2005b. 'Free Water' as commodity: The paradoxes of Durban's water service transformations. In McDonald, D.A. and Ruiters, G. (Eds), *The age of commodity: Water privatization in Southern Africa*, pp. 189-203. London and Sterling: Earthscan.
- Loftus, A. 2006. The metabolic processes of capital accumulation in Durban's waterscape. In Heynen, N.; Kaika, M. and Swyngedouw, E. (Eds), *In the nature of cities: Urban political ecology and the politics of urban metabolism*, pp. 173-190. London and New York: Routledge.
- Loftus, A. 2007. Working the socio-natural relations of the urban waterscape in South Africa. *International Journal and Regional Research* 31(1): 41-59.
- Loftus, A. 2009. Rethinking political ecologies of water. *Third World Quarterly* 30(5): 953-968.
- Luke, T.W. 1999. Environmentality as green governmentality. In Darier, E. (Ed), *Discourses of the environment*, pp. 121-151. Malden and Mass: Blackwell Publishers.

- MacLeod. 2009. Interview at the eThekwiwi water and sanitation unit, Durban, South Africa 2 April.
- McDonald, D.A. and Pape, J. 2002. *Cost recovery and the crisis of service delivery in South Africa*. Cape Town, London: Zed Press and HCRS Publishers.
- McDonald, D.A. and Ruiters, G. (Eds). 2005. *The age of commodity: Water privatization in Southern Africa*. London, Sterling: Earthscan.
- Naidoo, O.; Khumalo, D. and Bond, P. 2007. Eye on civil society column: eThekwini: drought hits the poor. The Mercury 3 July 2007.
- Narsiah, S. 2010. The neoliberalisation of the local state in Durban, South Africa. *Antipode* 42(2): 374-403.
- Nash, F. 2013. Participation and passive revolution: The reproduction of neoliberal water governance mechanisms in Durban, South Africa. *Antipode* 45(1): 101-120.
- Omann, I. and Spangenberg, J.H. 2002. Assessing social sustainability, the social dimension of sustainability in a socio-economic scenario. Paper presented at the 7th Biennial Conference of the International Society for Ecological Economics, 6-9 March 2002, Tunisia.
- Partridge, E. 2005. 'Social sustainability': A useful theoretical framework? Paper presented at the Australian Political Science Association Annual Conference, Dunedin, New Zealand, 28-30 September 2005.
- Reid, J. 2013. Interrogating the neoliberal biopolitics of the Sustainable Development-Resilience Nexus. *International Political Sociology* 7(4): 353-367.
- Rodina, L. and Harris, L.M. 2016. Water services, lived citizenship, and notions of the state in marginalised urban spaces: The case of Khayelitsha, South Africa. *Water Alternatives* 9(2): 336-355.
- Saul, J. and Bond, P. 2014. *South Africa: The present as history*. Johannesburg: Jacana.
- Shove, E. 2003. *Comfort, cleanliness and convenience: The social organization of normality*. Oxford and New York: Berg.
- Stockholm International Water Institute (SIWI). 2014. Press Release "Most progressive water utility in Africa" wins 2014 Stockholm Industry Water Award. www.siw.org/prizes/stockholmindustrywateraward/winners/2014-2/ (accessed 30 May 2014)
- Sofoulis, Z. 2005. Big water, everyday water: A sociotechnical perspective. *Continuum: Journal of Media & Cultural Studies* 19(4): 445-463.
- Stern, M. 2006. Racism, sexism, classism, and much more: Reading security-identity in marginalized sites. In Ackerly, B.A.; Stern, M. and True, J. (Eds), *Feminist methodologies for international relations*, pp. 174-198. Cambridge University Press, Cambridge.
- Strang, V. 2004. *The meaning of water*. Oxford and New York: Berg.
- Stren, R. and Polèse, M. 2000. Understanding the new sociocultural dynamics of cities: Comparative urban policy in a global context. In Polèse, M. and Stren, R. (Eds), *The social sustainability of cities*, pp. 3-38. Toronto: University of Toronto Press.
- Sultana, F. 2009. Fluid lives: Subjectivities, gender and water in rural Bangladesh. *Gender, Place and Culture* 16(4): 427-444.
- Sultana, F. and Loftus, A. 2014. *The right to water: Politics, governance and social struggles*. London and New York: Routledge Earthscan.
- Sutherland, C.; Scott, D.; Hordijk, M. 2015. Urban water governance for more inclusive development: A reflection on the 'waterscapes' of Durban, South Africa. *The European Journal of Development Research* 27(4): 488-504.
- Swyngedouw, E. 2005. Dispossessing H2O: The contested terrain of water privatization. *Capitalism Nature Socialism* 16(1): 81-98.
- The Department of Water and Sanitation, homepage. 2017. www.dwa.gov.za/drought/default.aspx (accessed 16 January 2017)
- Turner, R.K. 1993. Sustainability: Principles and practice. In Turner, R.K. (Ed), *Sustainable environmental economics and management: Principles and practice*, pp. 3-36. New York/London: Belhaven Press.
- Turton, A. 2002. Hydropolitics: The concept and its limitations. In Turton, A. and Henwood, E. (Eds), *Hydropolitics in the developing world: A Southern African perspective*, pp. 13-19. African Water Research Unit, Pretoria.
- UN (United Nations). 2015. Transforming our world: The 2030 agenda for sustainable development.

- www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E (accessed 19 January 2017)
- UN. 2016a. Millennium development goals and beyond 2015. www.un.org/millenniumgoals/ (accessed 2 June 2016).
- UN. 2016b. Sustainable development knowledge platform. <https://sustainabledevelopment.un.org/?menu=1300> (accessed 2 June 2016)
- Vallance, S.; Perkins, H.C. and Dixon, J.E. 2011. What is social sustainability? A clarification of concepts. *Geoforum* 42(3): 342-348.
- van Koppen, B.; Smits, S.; Moriarty, P.; Penning de Vries, F.; Mikhail, M. and Boelee, E. 2009. Climbing the water ladder: Multiple-use water services for poverty reduction. TP Series No. 52. The Hague, the Netherlands: IRC International Water and Sanitation Centre and International Water Management Institute. www.iwmi.cgiar.org/Publications/Other/PDF/TP52_Climbing_2009.pdf?Galog=no (accessed 15 January 2017)
- von Schnitzler, A. 2008. Citizenship prepaid: Water, calculability, and techno-politics in South Africa. *Journal of Southern Africa Studies* 34(4): 899-917.
- World Health Organization (WHO) and United Nations Children's Fund (UNICEF). 2015. Joint monitoring programme (JMP): Progress on drinking water and sanitation, 2015 Update and MDG assessment. www.wssinfo.org/fileadmin/user_upload/_resources/JMP-Update-report-2015_English.pdf (accessed 31 August 2016)

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